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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/437,370	11/10/99	CCHIKAZAWA	RCA-89-936

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EXAMINER

CHANG, A

ART UNIT PAPER NUMBER

2872

DATE MAILED: 07/13/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/437,370

Applicant(s)

Cchikazawa

Examiner

Audrey Chang

Group Art Unit

2872



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-16 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-16 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been
☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it contains more than one paragraphs and it contains language such as "the invention relates to" and "according to the invention" that are not precise. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-13 and 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 14 appears to be incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: between the light source and the image reproducing element. Claims 2-13 and 15-16 inherit the rejection from their respective claims.

Claim 1 also fails to give positive identification between the "light source means" and the "one light source" and the "other light source". Claims 2-13 inherit the rejection.

Claim 3 appears to be in error since the light beams can not be parallel beams toward the eyes if an image is intended to be viewed by the eyes. In general parallel beams will not form image. Furthermore,

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Figure 1 of the specification shows explicitly that the light beams are not parallel toward the eyes.

Corrections are required. The word "ellipsoido" recited in claim 9 appears to be in error.

Clarifications are required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 4-6, 10 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by the patent issued to Eichenlaub (PN. 5,311,220).

Eichenlaub teaches an autostereoscopic display that is comprised of a light generating illumination panel (1) having a plurality of light emitting lines, dots or other shaped areas for alternatively illuminating a transmissive light valve display (2), served as the transmissive image reproducing element, for alternatively displaying an image for left eye and an image for right eye, in accordance with the alternative illumination of the light emitting lines. The display further comprises a Fresnel mirror arrangement (17) placed behind the display valve serves as the optical means for directing left eye image to the left eye and the right eye image to the right eye to enable stereoscopic viewing, (please see Figure 9, columns 2-3 and 7). The control means for activating the light generating illumination panel for alternatively illuminating the display to provide left and right eye images respectively are implicitly included since it is an essential part of the display for capable of autostereoscopic display. The Fresnel mirror arrangement is of convergent type and it is implicitly true that it

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comprises mirror elements for directing light to the right eye and mirror elements for directing light to the left eye. With regard to claim 12, Eichenlaub teaches that the display light valve could be a liquid crystal display. This reference has therefore anticipated the claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 7-9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Eichenlaub.

The autostereoscopic display taught by Eichenlaub as described for claim 1 above has met all the limitations of the claims with the exception that this reference does not teach explicitly of the arrangement and shape of the Fresnel mirror arrangement as recited in claims 7-8. However to arrange the mirror elements in the Fresnel mirror arrangement with alternative arrangement and to have the mirror elements form stripe elongated in one direction are either inherently met by the disclosed Fresnel mirror arrangement in order to provide stereoscopic illusion or obvious modifications to one skilled in the art since such features are rather common arrangements for Fresnel mirror. With regard to claim 9, the cited reference also does not teach explicitly that the optical means may also be a cylindrical mirror means or an ellipsoid-paraboloid mirror however this specification fails to teach the criticality of having these types of mirror would overcome any problem in the prior art which uses a Fresnel mirror means such modification are therefore being considered as obvious matter of design choices for they are all well known mirror arrangement for directing light beams

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as desired. With regard to claim 11, this reference does not teach that the light emitting lines of the light generating illumination panel is elongated along one side of the display however since the specification fails to teach the criticality of having this particular arrangement would overcome any problem in the prior art such modification is therefore considered to be an obvious matter of design choice to one skilled in the art. Claim 3 can not be further examined here since it is in error.

8. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Tandler et al (PN. 5,835,264).

Tandler et al teaches an arrangement for stereoscopically viewing an object wherein the arrangement comprises light source for alternatively illuminating an object to provide images of the object for the left eye and right eye respectively, and an objective for transmitting and projecting the images on a digital micromirror device (DMD) wherein the micromirror device serves both as the image reproducing means and the optical means for directing the image for the left eye to the left eye and the image for the right eye to the right eye respectively in order to provide stereoscopic viewing of the object. Tandler et al teaches that the digital micromirror device comprises a plurality of micromirrors having angular positions that can be electrostatically changed such that the micromirrors are in a first position for directing image light to left eye and in a second position for directing image light to right eye, (please see Figures 13-15 and columns 7-9). This reference has met all the limitation of the claims with the exception that it does not teach explicitly to include a single light source however such feature could be either inherently met by the cited reference or an obvious modification to one skilled in the art since it simply involves obvious matter of design choice. With regard to claim 15, this reference does not teach explicitly that the micromirrors form stripes elongated in one direction however such feature may either inherently met or an obvious modification to one skilled in the art

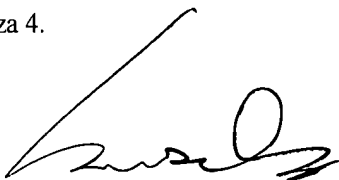
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for the benefit of providing desired image format. With regard to claim 16, although this reference does not teach explicitly that the micromirrors form matrix arrangement however such arrangement is very common type of DMD such feature is therefore either inherently met or an obvious modification to one skilled in the art for the benefit of providing fine adjustment for directing the light.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chang whose telephone number is (703) 305-6208.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Papers related to this application may be submitted to Group 2800 through facsimile transmission. Papers should be faxed to Group 2800 via PTO Fax Center (fax number 703-308-7722) located in Crystal Plaza 4.

A handwritten signature in black ink, appearing to read 'A. Chang', with a stylized flourish at the end.

A. Chang (Primary Examiner)

July 11, 2000